CLAIMS:

1. An X-ray imaging method comprising

- forming a set of 2-dimensional X-ray images (18) of an object to be examined, for example the coronary vascular system of a patient, by means of a scan rotation of an X-ray source (12) around said object over a run length (20), said X-ray images (3) being acquired at predetermined characteristic time moments in cardiac cycle (ED) of the object and

- reconstruction of a 3-dimensional volume thereof,

characterized in that the run length (20) of the scan rotation over substantially 180° is at least 15 s and preferably about 20 s.

2. An X-ray imaging method according to claim 1, characterized in that, before reconstruction, images obtained at predetermined corresponding characteristic time moments in successive cardiac cycles are correlated with each other.

3. An X-ray imaging method according to claim 2, characterized in that the characteristic time moments substantially correspond to R-peaks of the cardiac cycle.

4. An X-ray imaging method according to claim 1, characterized in that, before a reconstruction, images obtained at predetermined neighbouring time moments in a predetermined characteristic time interval of a cardiac cycle are correlated with each other.

5. An X-ray imaging method according to any one of the preceding claims, characterized in that the reconstruction is combined with modelling techniques.

6. 3D-rotational X-ray apparatus (1) for applying the method according to claim 1, comprising a circular C-arm (10) with a drive, the C-arm accommodating an X-ray source (12) and an X-ray image pick-up device (13) and being rotatable over an angle of substantially 180° around its center by means of said drive, triggering means for triggering the X-ray images at predetermined characteristic time moments in the cardiac cycle of the

object, and means for processing the images obtained to reconstruct a 3-dimensional volume of the object, characterized in that the drive of the C-arm (10) is adjusted to a run length of a scan rotation over substantially 180° which is at least 15 s and preferably about 20 s.